
SECTION 15761 - AIR COILS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Hot-water coils
 - 2. Chilled-water coils.
- B. Related Sections include the following:
 - 1. Division 15 Section "Control Systems Equipment" for coil temperature-control valve requirements.

1.3 SUBMITTALS

- A. Product Data: Include rated capacities of selected models; pressure drop; shipping, installed, and operating weights; installation instructions; and startup instructions for each type of product indicated.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 1. Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer-installed and field-installed wiring.
- C. Coordination Drawings: Reflected ceiling plans drawn to scale and coordinating coil location and ceiling-mounted access panels.
- D. Maintenance Data: For air coils to include in maintenance manuals specified in Division 1.

1.4 QUALITY ASSURANCE

- A. Comply with ARI 410, "Standard for Forced-Circulation Air-Cooling and Air-Heating Coils," for components, construction, and rating.
 - 1. Certify coils to ARI 410, "Standard for Forced-Circulation Air-Cooling and Air-Heating Coils."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Water Coils:
 - a. Aerofin Corporation.
 - b. Carrier Corporation.
 - c. Coil Company Inc.
 - d. Dunham-Bush, Inc.
 - e. Heatcraft Inc.; Heat Transfer Division.
 - f. Super Radiator Coils.
 - g. Trane Co. (The).
 - h. USA Coil and Air.

2.2 WATER COILS

- A. Description: Cleanable coil fabricated to ARI 410.
- B. Dampers: Arrangement of coil segments with face-and-bypass dampers and downstream damper.
 - 1. Arrangement: Horizontal coils and Vertical coils.
 - 2. Dampers: Extruded-aluminum blades with full-length drive rod.
- C. Piping Connections: Threaded, on same end.
- D. Tubes: Copper, complying with ASTM B 75 (ASTM B 75M).
- E. Fins: Aluminum.
- F. Fin and Tube Joint: Mechanical bond.
- G. Frames: Galvanized-steel channel frame.
- H. Ratings: Design tested and rated according to ASHRAE 33 and ARI 410.
 - 1. Working Pressure Ratings: 200 psig (1380 kPa), 325 deg F (163 deg C).
- I. Source Quality Control: Test to 300 psig (2070 kPa), and to 200 psig (1380 kPa) underwater.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine ducts, plenums, and units to receive air coils for compliance with requirements for installation tolerances and other conditions affecting coil performance.
- B. Examine roughing-in for piping systems to verify actual locations of piping connections before coil installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install coils level and plumb.
- B. Install coils in metal ducts and casings constructed according to SMACNA's "HVAC Duct Construction Standards, Metal and Flexible."
- C. Install galvanized-steel drain pan under each chilled-water coil.
 - 1. Construct drain pans to comply with ASHRAE 62.
 - 2. Construct drain pans to extend beyond coil length and width and to connect to condensate trap and drainage.
 - 3. Extend drain pan 5 inches upstream from coil face.
 - 4. Extend drain pan under coil headers and exposed supply piping.
- D. Install moisture eliminators for chilled-water and refrigerant coils.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to coils to allow service and maintenance.
- C. Unless otherwise indicated, connect piping with unions and shutoff valves to allow coils to be disconnected without draining piping. Refer to piping system Sections for specific valve and specialty arrangements.
- D. Ground equipment.
 - 1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.4 ADJUSTING

- A. Straighten bent fins on each air coil.

3.5 CLEANING

- A. After completing system installation, including outlet fitting and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finishes.
- B. Clean coils using materials and methods recommended in writing by manufacturers, and clean inside of casings and enclosures to remove dust and debris.

END OF SECTION 15761